



# POLICIES AND PROCEDURES

## MONTGOMERY COUNTY

### DEPARTMENT OF FIRE AND RESCUE SERVICES

NO. 807

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DATE  
May 8, 1994

TITLE COMMUNICABLE DISEASE AND HAZARDOUS  
MATERIALS EXPOSURE

DIRECTOR APPROVAL  
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#### PURPOSE

- 1.0 To ensure that personnel exposed to active or suspected cases of communicable disease or hazardous materials document the exposure, receive appropriate medical care, and have all records maintained in a confidential manner.

#### APPLICABILITY

- 2.0 All personnel in the Fire/Rescue Occupational Series.

- 2.1  This policy was developed in cooperation with the International Association of Firefighters, Local 1664.

#### DEFINITIONS

- 3.0 Communicable Disease - A disease, infectious to humans, that is reportable to the County or State Departments of Health or the Center for Disease Control.
- 3.1 Hazardous Material - A substance that presents an unusual danger to people due to properties of flammability, toxicity, chemical reactivity, decomposition, corrosivity, explosion, detonation, etiological hazards, and/or similar properties, when outside its normal mode of containment.
- 3.2 Safety Officer - DFRS employee appointed by the Director.
- 3.3 Exposure - The direct or indirect contact, while on-duty or in the performance of duty, with a disease or substance which has the potential of causing either short or long term harmful effects.

#### RESPONSIBILITIES

- 4.0 The Unit Officer-In-Charge is responsible for:
- a. completing the Supervisor's Incident Investigation Report and Employer's First Report of Injury whenever an immediate or short term injury due to an exposure occurs or may reasonably have occurred.
  - b. ensuring the exposed individual receives appropriate medical attention.
- 4.1 The Safety Officer is responsible for:
- a. verifying exposure reports when necessary.
  - b. making every reasonable effort to confirm the diagnosis of a communicable disease when exposure to a suspected communicable disease is reported.



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4.2 Exposed individuals are responsible for:

- a. notifying their supervisor when an exposure is suspected or actually occurs.
- b. seeking appropriate medical care when an exposure occurs.

**POLICY**

- 5.0 All personnel in the Fire/Rescue Occupational Series must participate in the Communicable Disease and Hazardous Materials Exposure Program.
- 5.1 The Supervisor's Incident Investigation Report (SIIR) and the Workers' Compensation Employer's First Report of Injury Forms must be completed for personnel who are exposed to hazardous materials or communicable diseases.
- 5.2 Communicable disease and hazardous material exposure are considered occupational injuries. Actual exposures must be treated with appropriate decontamination and medical care. Refer to DFRS policy #525, "Critical Injury Guide", if notifications are necessary.
- 5.3 The Montgomery County Government's Division of Risk Management is the data collection point for the Communicable Disease and Hazardous Materials Exposure Program.
- 5.4 Records must be maintained until the employee separates from county employment, at which time the employee will become the records custodian.
- 5.5 Management may keep data (absent name) for statistical purposes.

**PROCEDURES**

- 6.0 Personnel exposed to a communicable disease/hazardous material or suspecting an exposure, must report the incident to their supervisor immediately.
- 6.1 The supervisor will complete a Supervisor's Incident Investigation Report, Employer's First Report of Injury Form and ensure the employee receives appropriate medical attention. The forms must be forwarded to the Division of Risk Management within 48 hours of exposure.
- 6.2 Exposed personnel must follow the treatment guidelines outlined in Attachment 7.2.



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- 6.3 Personnel may request a copy of their exposure record by submitting a written request to the Division of Risk Management.
- 6.4 Should an exposure record or records be used to support any Workers' Compensation or other claim or litigation, the records must be made available to all parties in an open manner.
- 6.5 Each July, The Division of Risk Management will provide Local 1664 with a summary outlining the type(s), number(s), and worksite(s) affected for exposures that occurred during the past year. The summary will not include employees' names.

## ATTACHMENT

- 7.0 Reportable Diseases and Conditions Category I and II.
- 7.1 Procedure for Notification & Follow-up Regarding Communicable Disease.
- 7.2 Guidelines for Communicable Disease Prevention.
- 7.3 Supervisor's Checklist For Exposure To Communicable Disease Or Hazardous Materials.

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## REPORTABLE DISEASES AND CONDITIONS

## CATEGORY I - DISEASES OF IMMEDIATE PUBLIC HEALTH IMPORTANCE

o	AIDS (Acquired Immune Deficiency Syndrome)	o	Kawasaki Disease	o	Reye's Syndrome
	Amebiasis	o	Legionellosis (Legionnaires Disease)	o	Rocky Mountain Spotted Fever
	Animal Bites	o	Leprosy	o	Rubella (German Measles)
	Anthrax	o	Leptospirosis	o	Rubella Syndrome, Congenital
	Botulism	o	Lymphogranuloma Venereum	o	Rubeola (Measles)
o	Brucellosis	o	Malaria		Salmonellosis
	Chancroid	o	Meningitis (Specify Etiology)		Shigellosis
	Cholera	o	Meningococcal Infection		Smallpox
	Diphtheria		Mumps (Parotitis)		Staphylococcal and Other Infections
	Encephalitis (Specify Etiology)		Mycobacteriosis, Atypical		In Newborn
	Food Poisoning Outbreak		Occupational Diseases		Syphilis
	Gonococcal Infection	o	Pertussis	o	Tetanus
	Granuloma Inguinale	o	Plague	o	Trichinosis
	Guillain-Barre Syndrome	o	Polioomyelitis		Tuberculosis
o	Hepatitis, Viral: A	o	Psittacosis		Tularemia
	B		Rabies	o	Typhoid Fever
	Non-A/Non-B		Post-Exposure Rabies Prophylaxis		Typhus
	Unspecified		Relapsing Fever		Yellow Fever

## CATEGORY II - DISEASES OF GENERAL INTEREST

Chickenpox	o	Influenza	o	Group A Beta Hemolytic Streptococcal Infections Including Scarlet Fever.
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X. Procedure for Notification & Follow-up Regarding Communicable Diseases

- 1.1 When a patient is diagnosed as having a communicable disease, the hospital personnel will, according to Maryland law, notify the EMS Division of the DFRS.
- 1.2 As soon as possible an EMS Officer will obtain the following information from the hospital.
  - Disease
  - Date of Transport
  - Incident location
  - Ambulance number (if known)
  - Any diagnostic or prophylactic measures to be followed
- 1.3 The E.M.S. Division will notify the officer-in-charge of the fire/rescue dept. involved in the incident of the information received from the hospital; the screening criteria for determining possible exposure and any recommended follow up. The individual fire/rescue corporations will be responsible for notifying the personnel involved in the incident and arrange for any recommended follow-up.

XV. Exposure Control Plan for Bloodborne Diseases

## 1.0 INTRODUCTION

This exposure control plan has been developed to prevent the spread of communicable diseases which may be transmitted by blood or body fluids. It must be emphasized that currently the risk to EMS personnel is extremely small. However, many patients infected with a communicable disease do not know this and risk factors for the infection are not recognized in most patients. Therefore, to be absolutely safe, all patients should be managed as if infected and universal precautions used to prevent contamination with all body fluids. Although HIV (AIDS) and HVB (Hepatitis B) are specifically mentioned, adherence to these guidelines will lessen the risk of exposure to all types of communicable diseases that the rescuer may encounter.

Since exposures to communicable diseases can occur while performing routine patient care procedures, during auto extrication or while involved in other fire/rescue/EMS operations, all members of the fire and rescue service have the potential for an occupational exposure to a communicable disease and must adhere to this plan.

Initial training on the transmission and prevention of communicable diseases and management of exposures will be provided to all personnel and will also be a part of the basic EMT-A and EMT-A refresher classes. Yearly in station retraining will also be available to all personnel. The Occupational Medical Section and the EMS Division will develop and provide these training programs. The corporations and DFRS must maintain records of the training provided to its personnel.

## 2.0 DEFINITION OF EXPOSURE

An exposure of a health care provider to the HIV or HVB virus requires very specific conditions. The virus must be directly introduced into the person's body. In the health care environment, this means an infected patient's blood or body fluid must be introduced through the skin (percutaneous) or by contact with eye, mouth, or nose (mucocutaneous event).

## 2.1 Percutaneous (through the skin)

A percutaneous event occurs when the blood or body fluid is introduced through the skin. This can occur by a needle stick injury with a bloody needle, by sustaining a cut by a sharp object contaminated with blood, or by having blood contaminate an already existing open wound, sore, broken cuticle, or chapped skin.

## 2.2 Mucocutaneous (in eye, mouth, or nose)

A mucocutaneous event occurs when blood or body fluids come in contact with a mucous membrane. This means blood or body fluid is splashed into the eye, mouth, or nose. Even though the AIDS virus has been isolated from saliva, there are no known cases of AIDS being transmitted by mouth-to-mouth resuscitation.



2.3 The following are not considered an exposure

- 2.3.1 Blood on clothing or equipment only
- 2.3.2 Being present in the same room or ambulance with an infected person or providing patient care
- 2.3.3 Touching or talking to the infected person

## 2.4 AIDS and Hepatitis B

It is important to note that acquisition of the Hepatitis B virus occurs via these same percutaneous and mucocutaneous events. This virus is much more hardy than the AIDS virus. Health care providers are at much greater risk of acquiring Hepatitis B than AIDS. However, the same infection control measures recommended for the care of an AIDS patient should be used for a patient with Hepatitis B. In addition a vaccine for Hepatitis B is available free of charge to all active members of the fire and rescue service via the Occupational Medical Section, 217-6910. If you do not desire to have this vaccine administered, you must sign a waiver.

## 2.5 What to Do If You Have an Exposure In the Field

- 2.5.1 Percutaneous (through the skin) - Wipe off blood, scrub area with soap and water or antiseptic hand cleaner for five to ten minutes and allow wound to bleed to remove any contaminants.
- 2.5.2 Mucocutaneous (in eye, nose, or mouth) - Flush eye thoroughly for 15 minutes or rinse mouth with saline or water.
- 2.5.3 On arrival at the hospital and as soon as patient care allows, thoroughly wash your hands and/or the wound; wash face and flush eyes for eye exposures. Have a physician in the Emergency Department assess and provide treatment for any wound.

## 2.6 Follow up Procedures

- 2.6.1 Notify your supervisor. Career personnel must refer to DFRS Policy and Procedure #807 for applicable documentation records. Volunteer personnel should document the circumstances of the exposure and follow their own corporation policy.
- 2.6.2 Complete a First Report of Injury Form. This will ensure that both volunteer and career personnel will be covered by Workman's Compensation. Career personnel must also follow DFRS Policy and Procedure #801.
- 2.6.3 If the exposure is the result of a needle stick or sharp instrument injury or mucocutaneous exposure, report to the hospital Emergency Department for appropriate treatment. Damascus and Flower Hill Immediate Care centers can also be used.
- 2.6.4 All personnel must notify the Occupational Medical Section as soon as possible after an exposure to any communicable disease; the 24 hour hotline number is 217-6917. The OMS will provide post-exposure follow-up to all volunteer and career personnel and ensure that appropriate medical care and prophylactic treatment is given. Record keeping for all exposures will be the responsibility of the OMS.

## 3.0 PATIENT CARE PRACTICES FOR THE PREVENTION OF COMMUNICABLE DISEASES

The most important factor in protecting health care providers from acquiring AIDS and other communicable diseases is to carefully follow infection control guidelines. Any patient's blood or body fluid must be considered as infectious and therefore universal precautions must be used on all EMS incidents. This means appropriate protective attire such as gloves, masks, and eye protection must be worn when the likelihood of percutaneous (through the skin) or mucocutaneous (in the mouth, nose, or eye) exposures to the patient's blood is high. This is especially important for first responders to situations involving open injuries, such as gunshots and stabbings, high speed motor vehicular accidents, or delivering babies. For most situations, the chance that the patient is bleeding can be determined in advance. Therefore, if the chances of handling blood or body fluids is high (CPR; IV insertion; trauma; delivering babies), the provider should put on the protective attire before beginning patient care. It is much easier to take off gloves and masks if they are not necessary than to attempt to put them on in an emergency.

## 3.1 Personal Protective Equipment Guidelines

This dress code should be followed when responding to calls involving open injuries such as gunshots and stabbings; high speed motor vehicular accidents; delivering babies; or any situation where the provider must handle blood or body fluids. It is designed to minimize the occurrence of percutaneous and mucocutaneous exposures. As a minimum level of protection gloves must be worn on all EMS incidents. All fire/rescue/EMS personnel must don the appropriate protective gloves prior to arrival at the scene. The gloves may be removed when it has been determined that there is no risk of an exposure to a communicable disease.

Three types of gloves must be available.

- 3.1.1 Heavy duty or leather gloves. These should be worn when performing extrication procedures to protect the hands from cuts and scratches that could become contaminated with a patient's blood or body fluids.
- 3.1.2 Mid-weight rubber or plastic gloves. These should be worn for those nonpatient care duties that may involve handling of equipment contaminated with blood or secretions as well as cleaning the interior of ambulances or equipment. These gloves can be disposable or nondisposable types. Household rubber gloves are one example.
- 3.1.3 Medical grade latex gloves. These should be worn for all patient care procedures that may involve contamination of the hands with blood or body fluids. This includes IV insertions; dressing and splinting open injuries; establishing patent airways; delivering babies; etc. Examples include sterile surgical gloves and disposable nonsterile gloves. These gloves must be changed after each patient contact.



## 3.2 Masks

Masks are not necessary for most situations. Medical grade face masks should be worn by direct patient care providers in those situations where blood and/or body secretions could be splashed into the provider's mouth or in suspected cases of airborne transmitted disease such as tuberculosis, influenza, measles, pneumonia and meningitis.

## 3.3 Eye Protection

Eye protection should be worn in those situations where blood or body fluids could be splashed into a provider's eye. Eye protection can be either glasses, goggles, or helmet visors. There are now available full face shields and mask combinations which also may be used.

## 3.4 Gowns

Gowns should be worn whenever there is a possibility of blood spattering such as during emergency childbirth or uncontrolled bleeding situations. Standard cloth hospital gowns become easily saturated with blood. Impervious plastic gowns and cover suits like Tyvek coveralls offer more protection and must be available on all EMS vehicles. If gowns are not worn, the best action is to change soiled clothing as soon as possible and shower or wash any skin that may be contaminated with blood. An extra change of clothing should always be kept in your station. Remember blood on clothing is NOT considered to be an exposure to the AIDS virus, and the virus dies in a very short time once it dries. The Hepatitis B virus however can live much longer on clothing. Therefore, all contaminated clothing should be considered infectious and placed in red plastic bags for transport to the laundry in the station or home.

## 3.5 Protection of Broken Skin

The provider should protect any of his/her cuts, abrasions, insect bites, etc. with bandaids or small dressings. This will reduce even further the already low risk of having blood introduced through the skin.

## 3.6 Mouth-to-Mouth Resuscitation

It is strongly recommended that respiratory assist devices be used whenever possible. Some examples include pocket masks with one-way valves and bag-valve masks. This equipment is available on all EMS vehicles and should be added to all other fire/rescue apparatus.

## 3.7 Handling of Sharp Instruments

Take special care when handling sharp instruments, needles, and/or glass. The majority of needle stick injuries occur when recapping needles. Don't do it. Dispose of needles and other sharp instruments in impervious red biohazard puncture resistant containers. All MICUs are equipped with these containers.

## 3.8 Hand washing

Thorough hand washing should be performed after each patient transport even when gloves are worn. Waterless antiseptic hand cleaners or towlettes must be available on all EMS vehicles.

## 4.0 CLEANING AND DECONTAMINATION PROCEDURES

## When Are They Necessary?

Although many aspects of AIDS are unknown, we do know that the disease is caused by a virus. In order for a virus to reproduce and survive it must be inside another living organism. For the AIDS virus, this means inside a human body. This virus quickly dies with contact to air. If the virus is in a fluid or blood, it dies when the fluid dries while the Hepatitis B virus can live much longer. Routine cleaning of environmental surfaces is adequate prevention for the transmission of these diseases. However, disinfection and sterilization of devices and equipment that enter directly into the body must be performed to prevent transmission of disease. Examples are airways and laryngoscopes.

## 4.1 Use of Disinfectants for Communicable Disease Control

Applications of a disinfectant must be done on clean surfaces. The greater the amount of blood and dirt, the less effective the disinfectant.

Bleach - 1:10 dilution. This is 1 cup of bleach to 9 cups of water (slightly more than 1/2 gallon). Bleach is a powerful antimicrobial (germ killing) agent and is therefore recommended to clean fresh (undried) blood spills. It does have some disadvantages - it is corrosive to metal; it can hamper the function of electronic and electrical equipment; it can decolorize fabrics; and the solution must be freshly prepared each time it is used.

## 4.2 Care of Equipment

Since most nondisposable pre-hospital equipment does not interface directly with the patient's cardiovascular system or respiratory system, sterilization and high level disinfection are not required. Decontamination can be accomplished in most cases by thorough cleaning with hot soapy water. However, if the equipment has been heavily contaminated with blood and/or body fluids, cleaning can be followed by disinfection with the recommended bleach solution. Selection of the proper disinfectant should be determined by the manufacturer of the equipment. All respiratory assist equipment should be completely cleaned and disinfected after each use. Gloves should be worn for all cleaning and decontamination procedures.

## 4.3 Cleaning MAST Trousers

Fresh undried blood should be wiped off with a 1:10 dilution of bleach. The outer fabric is made of nylon pack cloth with Scotchguard and will withstand cleaning with laundry detergents, 1:10 dilution of bleach, and temperatures up to 200 F. The MAST trousers can be washed in a standard washing machine using the "hot setting" for water temperature and 1 cup of bleach. Before placing them in the washing machine, be certain that the air valves are closed. If a washing machine is not available, manual cleaning is acceptable. After washing, the fabric may be air dried or placed in a dryer.

#### 4.4 Cleaning the Interior of Transport Vehicles

Food must not be eaten or transported in the patient care compartment of ambulances due to the possibility of becoming contaminated. The interior of ambulances must be kept clean. Routine cleaning procedures with detergents are adequate decontamination. Blood spills should be cleaned with a 1:10 dilution of bleach. Bleach is an excellent disinfectant but the chlorine can corrode metal if left on for too long. Be careful not to use bleach on instrument panels, electrical outlets, electronic equipment, radios, etc. 70% isopropyl alcohol may be used instead with a 10 minute contact time.

#### 4.5 Care of Clothing

According to the CDC (Centers for Disease Control), routine laundry practices are adequate to decontaminate clothing that is soiled with the blood or body fluids of AIDS patients. The "high setting" of household water heaters is equal to 140 - 160 F and will kill viruses. This is the same temperature used in hospitals and commercial laundries. Therefore, hot water and detergent are sufficient. It is also not necessary to exceed 1 cup of bleach per washtub of water. Standard dry cleaning chemicals also provide adequate cleaning. Remember to carry contaminated clothing to the laundry area in red plastic bags and wear protective gloves when handling this clothing.

#### 4.6 Disposal of Sharp Instruments and Soiled Materials

Disposal of sharp instruments and materials such as dressings, gloves, etc. that are contaminated with blood and body fluids must be in accordance with OSHA regulation 29 CFR 1910.1030 as follows:

##### 4.6.1 Sharp Instruments

Needles, razors, etc. must be disposed of in red, heavy impervious containers (metal or plastic) that are marked "biohazard". When the container is full, it must be disposed of at the receiving hospital according to their infection control procedures or via a licensed bio hazard waste removal contractor.

##### 4.6.2 Disposable Items

Disposable single use items such as dressings, gloves, etc. that are contaminated with blood or body fluids must be placed in an impervious red plastic bag and disposed of at the receiving hospital according to their infection control procedures or via an approved bio hazard waste contractor.

If common sense is used, and if this Exposure Control Plan is followed, the risk of transmission of any disease to EMS personnel is very low. Research on communicable diseases continues, and as new information is developed, it will be made available to all personnel. Questions about specific diseases should be referred to the Occupational Medical Section at 217-6910.

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ATTACHMENT 7.3  
DEPARTMENT OF FIRE AND RESCUE SERVICES  
MONTGOMERY COUNTY, MD.

**SUPERVISOR'S CHECKLIST**  
**FOR HANDLING EXPOSURES TO COMMUNICABLE DISEASE**  
**OR HAZARDOUS MATERIALS**

**INITIALS**

- \_\_\_\_\_ 1. Ensure employee has thoroughly cleansed the exposure site.
- \_\_\_\_\_ 2. Ensure employee reports to Emergency Department for treatment of injury.
- \_\_\_\_\_ 3. Ensure employee notifies the Occupational Medical Section ASAP.
- \_\_\_\_\_ 4. Complete a Supervisor's Incident Investigation Report, and complete a Worker's Compensation Employer's First Report of Injury Form (refer to DFRS Policy and Procedure #801).
- \_\_\_\_\_ 5. Forward reports to S.C.O. and give copies to employee.
- \_\_\_\_\_ 6. Ensure employee receives appropriate follow-up care from O.M.S.